

Remarks

Reconsideration of the application is respectfully
 5 requested. No new matter has been added to the application.
 The venting of the gas phase directly from the gas circulation
 system 110 and the addition of fresh air directly to the gas
 circulation system 110 are clearly shown in Figs. 1-2 and
 described on page 3 of the published US patent application no.
 10 US 2007/0221345.

Applicant noticed that the current application (US
 2007/0221345) was published without including the amendments
 of the patent text as requested in the preliminary amendment
 filed 3 October 2006. For example, the patent text refers to
 15 the claims in a way that is not permitted according to US
 patent practice. It is respectfully requested that the
 amendments of the application be made according to the
 preliminary amendment. For your convenience, the requested
 amendments of the specification have been made in this
 20 amendment also. The Examiner is respectfully requested to
 ensure the requested amendments are made to the application.

Claims 12-17 were rejected under Section 112 for
 being indefinite. The claims have now been amended and should
 fully conform to Section 112.

25 Claims 1-17 were rejected under Section 102 as being
 anticipated by or in the alternative under Section 103 as
 being obvious over Ingelman. This rejection is respectfully

traversed.

One important feature of the present invention is the surprising insight that it is not necessary to connect the lime mud side of the filter to the atmosphere in order to obtain the required amount of oxygen for the oxidation of the lime mud. It turns out that a portion of the recirculated gas can be exchanged for fresh air in the pressurized system to complete the oxidation of the lime mud without having to expose the lime mud or the entire filtering process to the atmosphere as was done in the prior art filters.

The Ingelman reference merely discloses a conventional system that focuses on keeping all the receiving chutes from accumulation of lime sludge without having to dilute the lime sludge further with dilution liquid (paragraph 0013 of US patent application no. US 2004/0069721). Figs. 1 and 3 each shows a blower 7 in a gas recirculation line extending from the filtrate tank 6 to the filter vessel 1. There are no valves in the recirculation line for venting gas or adding fresh air to the recirculation line. There are valves 26a and 26b connected to in-feed and out-feed lines respectively in the filter vessel 1, and it is only generally described that these valves are used to regulate the overpressure in the filter and thus the filtration flow through the filter. However, there is no explanation what kind of flow is promoted in these lines or how they are controlled. The in-feed line could correspond to the in-feed

line for the lime mud slurry to be filtered. The in-feed of lime mud slurry and the level of lime mud established in the filter is a dominant process condition for establishment of the overpressure in the filter. The in-feed line could also be a supply line for any process inert gases, and thus have NO oxidation potential at all. The out-feed line could also be a standard safety valve for releasing any overpressure. A lot of gases are produced from the lime mud slurry since this slurry is not fully causticized and still have on-going residual chemical reactions.

The Examiner has rejected the claims without any detailed explanations. The Office action includes copies of drawings from cited patents and merely includes a short statement that "the valves 26a and 26b are seen to meet the limitation of air admission." As indicated above, there is no explicit teaching of any air or gas admission.

The amended claim 1 has many limitations that have not been shown by the Examiner. For example, the Examiner is respectfully requested to explain where in the cited Ingelman reference the step of venting a pre-determined amount of the gas phase directly from the gas circulation system is shown particularly in view of the anticipation rejections under Section 102. Additionally, the Examiner is requested to explain where the cited Ingelman patents teach the step of adding an equivalent pre-determined amount of fresh air directly to the gas circulation system to maintain a partial

pressure of oxygen gas above a pre-determined minimum level, as required by the claims. The Applicant cannot see that there is any venting directly from the gas circulation system to which the blower 7 is connected. Similarly, the Applicant fails to see where and how Ingelman teaches the step of adding an equivalent amount of fresh air directly to the gas circulation system. Additionally, it is submitted that the cited Ingelman reference fails to teach or suggest adding fresh air directly to the gas circulation system.

The cited Ingelman reference merely explains in a general sense that the valves 26a/26b are controlling the overpressure. Valve 26b could thus be controlling the in-feed of slurry to be filtered, while valve 26a could be a safety valve for releasing any over-pressure, as indicated above. For example, valve 26b could be a control valve for the in-feed of slurry like feed line 18 in US Patent No. 4,695,381. As the in-feed of slurry to be filtered is maintained to hold the liquid level in the filter, also a certain amount of gases are produced in the residual caustization process, which forms off-gases. Over time a pressurized disc filter would reach over pressures if the excess gases emitted are not vented away. It is submitted that there is no indication in Ingelman that fresh air is supplied via valve 26b. Even if Ingelman could be interpreted to show that fresh air is supplied via valve 26b, Ingelman still fails to teach or suggest the steps of venting the predetermined amount of the gas phase directly

from the gas circulation system and adding the equivalent predetermined amount of fresh air directly to the gas circulation system as required by the amended claims 1 and 12.

In view thereof, it is submitted that the rejections of the independent claims 1 and 12 as being anticipated by Ingelman under Section 102 should be withdrawn.

Regarding the anticipation rejections, claims 2-11 and 13-17 are submitted to be allowable because they depend on the allowable base claims 1 and 12, respectively, as because each claim includes limitations that are not taught or suggested in the cited references.

Claims 1-17 were also rejected as being obvious over Ingelman under Section 103. This rejection is respectfully traversed.

The Examiner has not provided any rationale for the obviousness rejections. Copies of several drawings of patents in addition to Ingelman were provided in the Office action without any explanations. Strid merely mentions that valve 21 is adapted to provide a pressure of substantially zero between the blowers, and the valve 22 is adapted to prevent an excessive pressure in the gas space of vessel 1. Strid fails to teach or suggest the step of adding an equivalent amount of fresh air directly to the gas circulation system to maintain a partial pressure of oxygen gas above a pre-determined minimum level as required by the amended claims 1 and 12.

As provided in M.P.E.P. § 2142, the Supreme Court in

KSR International v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007) specified that the analysis supporting a rejection under 35 U.S.C. § 103 should be made explicit. “[R]ejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Furthermore, the Examiner must make “explicit” this rationale including a detailed explanation of “the effects of demands known to the design community or present in the marketplace” and “the background knowledge possessed by a person having ordinary skill in the art” (*KSR*, page 14).

As indicated above, the Examiner has provided NO rationale why it would be obvious to modify Ingelman to meet the requirements of the amended claims 1 and 12. The only statement provided is that “Ingelman is seen to meet the limitation of the claims. Valves 26a and 26b are seen to meet the limitation of air admission.” In other words, no rationale whatsoever is provided why it would be obvious to modify Ingelman.

The rationale of the statements lacks the required explicit and articulated reasoning with some rational underpinning for supporting any *prima facie* conclusion of obviousness. According to M.P.E.P. 2142, “the examiner bears the initial burden of factually supporting any *prima facie*

conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." Because a *prima facie* conclusion of obviousness has not been provided in the present
 5 Office Action, Applicant respectfully requests reconsideration and withdrawal of this ground for rejection as to claims 1 and 12, and any additional remaining claims to the extent they may depend therefrom.

Regarding the obviousness rejections, claims 2-11
 10 and 13-17 are submitted to be allowable because they depend on the allowable base claims 1 and 12, respectively, as because each claim includes limitations that are not taught or suggested in the cited references.

The application is now submitted to be in condition
for allowance, and such action is respectfully requested.

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Respectfully submitted,

FASTH LAW OFFICES

/rfasth/

Rolf Fasth

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Registration No. 36,999

FASTH LAW OFFICES
26 Pinecrest Plaza, Suite 2
Southern Pines, NC 28387-4301
Telephone: (910) 687-0001
Facsimile: (910) 295-2152

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